Education Standards for the NASA Quest LIMA Challenge

National Science Education Standards: Grades K–4

NS.K–4.1 Content Standard A: Science as Inquiry

• *Abilities necessary to do scientific inquiry*

• *Understanding about scientific inquiry*

NS.K–4.2 Content Standard B: Physical Science

• *Properties of objects and materials*

NS.K–4.4 Content Standard D: Earth and Space Science

• *Properties of earth materials*

• *Changes in earth and sky*

NS.K–4.5 Content Standard E: Science and Technology

∫• *Abilities of technological design*

• *Understanding about science and technology*

NS.K–4.6 Content Standard F: Personal and Social Perspectives

• *Changes in Environments*

NS.K–4.7 Content Standard G: History of Nature and Science

• *Science as a human endeavor*

National Science Education Standards: Grades 5–8

NS.5–8.1 Content Standard A: Science as Inquiry

• *Abilities necessary to do scientific inquiry*

• *Understanding about scientific inquiry*

NS.5–8.2 Content Standard B: Physical Science

• *Properties and changes of properties in matter*

NS.5–8.4 Content Standard D: Earth and Space Science

• *Structure of the Earth system*

• *Earth's history*

NS.5–8.5 Content Standard E: Science and Technology

• *Abilities of technological design*

• *Understandings about science and technology*

NS.5–8.6 Content Standard F: Science in Personal and Social Perspectives

• *Natural hazards*

• *Science and technology in society*

NS.5–8.7 Content Standard G: History and Nature of Science

• *Science as a human endeavor*

• *Nature of science*

• *History of science*

National Social Science Education Standards: Grades K–12

NSS–G.K–12.1: The World in Spatial Terms

• *Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.*

• *Understand how to analyze the spatial organization of people, places, and environments on Earth's surface.*

NSS–G.K–12.2: Places and Regions

• *Understand the physical and human characteristics of places.*

• *Understand that people create regions to interpret Earth's complexity.*

• *Understand how culture and experience influence people's perceptions of places and regions.*

NSS–G.K–12.3: Physical Systems

• *Understand the physical processes that shape the patterns of Earth's surface.*

NSS–G.K–12.5: Environment and Society

• *Understand how human actions modify the physical environment.*

NSS–G.K–12.6: The Uses of Geography

• *Understand how to apply geography to interpret the past.*

• *Understand how to apply geography to interpret the present and plan for the future.*

National Technology Education Standards: Grades K–12

NT.K–12.3: Technology Productivity Tools

• *Students use technology tools to enhance learning, increase productivity, and promote creativity.*

• *Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.*

NT.K–12.4: Technology Communication Tools

• *Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.*

• *Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.*

National Language Arts Education Standards: Grades K–12

NL–ENG.K–12.4: Communication Skills

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

NL–ENG.K–12.5: Communication Strategies

Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

NL–ENG.K–12.7: Evaluating Data

Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

NL–ENG.K–12.8: Developing Research Skills

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

NL–ENG.K–12.12: Applying Language Skills

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).